

REMARKS

Claims 1-79, 81-86, and 88-96 remain in the application. Claim 1 is amended to include the limitations of claim 80, which is accordingly canceled. Independent claim 86 is amended to include the limitations of claim 87, which is accordingly canceled. Independent claim 88 is amended to recite the improvement of using a drug over the acoustics alone, as is independent claim 96, in the affected portion. Basis for the amendments is found in paragraphs 0010, 0076, 0085, 0087, 0172, and 0223, for example.

Claims 1-96 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over Claims 1-4, 6-17, and 20-99 of U.S. Patent Application No. 2005/0020945.

The referenced patent application bears Serial No. 10/767,752, filed January 29, 2004, and is a continuation-in-part of the instant application and thus is later in time. Applicants respectfully decline to submit a Terminal Disclaimer in the present application. However, if and when Applicants are presented with the obviousness-type double patenting rejection in the CIP application, they will consider filing such a Terminal Disclaimer in that application. Indeed, since the claims in the present application are amended to recite allowable subject matter, then the present application should be passed to issue and the double patenting rejection applied in the CIP application.

Claims 1-6, 11-16, 21-36, 39-42, 49-56, 58, 60, 62-66, 69, 71-76, 78-79, 81-86, 88-90, and 92-96 are rejected under 35 USC 103(a) as being unpatentable over Jolesz et al (U.S. Patent 5,752,515) in view of Chalifour et al (U.S. Patent Application 2004/0006092).

Jolesz et al, cited by Applicants in paragraph 0022 and discussed in their Information Disclosure Statement on page 10, filed on September 16, 2003, is directed to methods and apparatus for image-guided ultrasound delivery of compounds through the blood-brain barrier. Image-guide methods and apparatus for ultrasound delivery of compounds through the blood-brain barrier to selected locations in the brain target a selected location in the brain. Applying ultrasound in the tissues and/or fluids at that location effects a change detectable by imaging. At least a portion of the brain in the vicinity of the selected portion is imaged, e.g., via magnetic resonance imaging, to confirm the location of that

change. A compound, e.g., a neuropharmaceutical, in the patient's bloodstream is delivered to the confirmed location by applying ultrasound to effect opening of the blood-brain barrier at that location and, thereby, to induce uptake of the compound there. Applicants' remarks concerning this reference, set forth in the previous Amendment filed January 22, 2007, obtain here as well.

Chalifour et al disclose amidine derivatives for treating amyloidosis. In particular, the reference discloses a method of treating or preventing an amyloid-related in a subject comprising administering to the subject a therapeutic amount of an amidine compound.

The incorporation of the limitations of claim 80 (objected to by the Examiner) in claim 1 is considered to overcome the rejection with regard to claims 1-6, 11-16, 21-36, 39-42, 49-56, 58, 60, 62-66, 69, 71-76, 78-79, and 81-85. The incorporation of the limitations of claim 87 (objected to by the Examiner) in independent claim 86 is considered to overcome the rejection with regard to claim 86.

With regard to independent claim 88, neither reference, alone or together, suggests that the optional drug enhances the therapeutic treatment over the acoustics alone in the portion (being exposed to the acoustics, or ultrasound). Jolesz et al apply ultrasound to effect ***opening of the blood-brain barrier*** to permit delivery of a drug to a targeted region of the brain. However, there is no disclosure or suggestion that the targeted region of the brain itself is exposed to ultrasound and the optional drug to thereby enhance the ***effect of the therapeutic treatment*** over ultrasound alone.

Since claims 89-90 and 92-95 depend from claim 88, then these claims as well are patentable for at least the same reasons.

With regard to independent claim 96, neither reference, alone or together, suggests that the system is used with a drug that enhances the slowing, stopping or avoiding (a patient's cognitive losses) in the portions (of the patient's anatomy subjected to the acoustic or vibrational energy. Jolesz et al applies ultrasound to effect ***opening of the blood-brain barrier*** to permit delivery of a drug to a targeted region of the brain; see, e.g., Abstract. However, there is no disclosure or suggestion that the targeted region of the brain itself is exposed to ultrasound and the optional drug to thereby enhance the ***effect of the therapeutic treatment*** over ultrasound alone.

Reconsideration of the rejection of claims 1-6, 11-16, 21-27, 30-36, 39-42, 49-56, 58, 60, 62-66, 69, 71-76, 78-79, 81-86, 88-90, and 92-96, as amended, under 35 USC 103(a) as being unpatentable over Jolesz et al in view of Chalifour et al is respectfully requested.

Claims 1, 7-10, 17-20, 41, 43, 59, 61, 77, 88, and 91 are rejected under 35 USC 103(a) as being unpatentable over Brisken et al (U.S. Patent 6,464,6800) in view of Chalifour et al, *supra*.

Brisken et al disclose ultrasound enhancement of drug injection. A method of enhancing cellular absorption of a substance delivered into a target region of a patient's body, comprises: (a) delivering the substance to the target region, and (b) directing vibrational energy to the target region, wherein the vibrational energy is of a type and in an amount sufficient to enhance absorption into cells of the target region. Applicants' remarks concerning this reference, set forth in the previous Amendment filed January 22, 2007, obtain here as well. The Chalifour et al reference is discussed above.

The incorporation of the limitations of claim 80 in claim 1 is considered to overcome the rejection with regard to claims 1, 7-10, 17-20, 41, 43, 59, 61, and 77.

With regard to independent claim 88, neither reference, alone or together, suggests that the optional drug enhances the therapeutic treatment over the acoustics alone in the portion (being exposed to the acoustics, or ultrasound). Brisken et al apply ultrasound to a substance delivered to a target region for the purpose of enhancing **absorption** of the substance into cells of the target region; see, e.g., Abstract. However, there is no disclosure or suggestion that the targeted region of the brain itself is exposed to ultrasound and the optional drug to thereby enhance the **effect of the therapeutic treatment** over ultrasound alone.

Since claim 91 depends from claim 88, then this claim as well is patentable for at least the same reasons.

Reconsideration of the rejection of claims 1, 7-10, 17-20, 41, 43, 59, 61, 77, 88, and 91, as amended, under 35 USC 103(a) as being unpatentable over Brisken et al in view of Chalifour et al is respectfully requested.

Claims 37, 38, 57, and 92 are rejected under 35 USC 103(a) as being unpatentable over Jolesz et al, *supra*, in view of Hynynen et al (U.S. Patent 6,514,221), and further in view of Chalifour et al, *supra*.

The Jolesz et al reference is discussed above. Hynynen et al, cited by Applicants in paragraph 0022 and discussed in their Information Disclosure Statement on page 10, filed on September 16, 2003, is directed to the blood-brain barrier opening. A method of opening a blood-organ barrier of a subject includes providing an exogenous agent configured to facilitate opening of the blood-organ barrier, administering the exogenous agent to desired region of the subject, and applying energy to the desired region of the subject while the exogenous agent is present in the desired region, the energy being in a blood-organ-barrier-opening amount sufficient to induce opening of the blood-organ barrier of the subject with the exogenous agent present and below a damage amount sufficient to induce thermal damage to tissue in the absence of the exogenous agent. Applicants' remarks concerning this reference, set forth in the previous Amendment filed January 22, 2007, obtain here as well. The Chalifour et al reference is discussed above.

Claims 37, 38, and 57 depend from claim 1, which has been amended to incorporate allowable subject matter. Claim 92 depends from claim 88, and is considered to be patentable for at least the same reasons that claim 88 is considered to be patentable.

Reconsideration of the rejection of claims 37, 38, 57, and 92 under 35 USC 103(a) as being unpatentable over Jolesz et al in view of Hynynen et al and further in view of Chalifour et al is respectfully requested.

The Examiner indicates that claims 44-48, 67-68, 70, 80, and 87 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As indicated above, claim 1 has been amended to include the limitations of claim 80. Claim 86 has been amended to include the limitations of claim 87. Claim 88 has been amended to recite the improvement of using a drug over the acoustics alone, as has independent claim 96, in the affected portion. In all instances, the amendments to the independent claims are intended to advance the prosecution. No disclaimer to the subject matter as originally filed is intended.

The foregoing amendments and arguments are submitted to place the application in condition for allowance. The Examiner is respectfully requested to take such action. If the Examiner has any questions, he is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,

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